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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/638,082	08/14/2000	Jeffrey A. Dean	Google-3 (GOOGP008)	1030

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EXAMINER
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SMITH, PETER J

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 02/12/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/638,082

Applicant(s)

DEAN ET AL.

Examiner

Peter J Smith

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 14 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This action is responsive to communications: application filed on 08/14/2000, IDS filed on 09/22/2000.
2. Claims 1-24 are pending in the case. Claims 1, 10, 12, 20, 22, and 23 are independent claims.

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 10-11 and 20-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Dependent claims 11 and 21 include a “carrier wave” which is non-statutory because it does not fit into any of the three product statutory classes because it is non-physical. See MPEP §2106:

For the purposes of a 35 U.S.C. 101 analysis, it is of little relevance whether the claim is directed to a machine or a process. The legal principles are the same. *AT & T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1357, 50 USPQ2d 1447, 1451 (Fed. Cir. 1999).

(a) Statutory Product Claims

Products may be either machines, manufactures, or compositions of matter.

A *machine* is “a concrete thing, consisting of parts or of certain devices and combinations of devices.” *Burr v. Duryee*, 68 U.S. (1 Wall.) 531, 570 (1863).

A *manufacture* is “the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties or combinations, whether by hand labor or by machinery.” *Chakrabarty*, 447 U.S. at 308, 206 USPQ at 196-97 (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11 (1931)).

A *composition of matter* is “a composition of two or more substances [or] . . . a[] composite article, whether [it] be the result[] of chemical union, or of mechanical mixture, or whether . . . [it] be [a] gas[], fluid[], powder[], or solid[].” *Id.* at 308, 206 USPQ at 197 (quoting *Shell Development Co. v. Watson*, 149 F. Supp. 279, 280, 113 SPQ 265, 266 (D.D.C. 1957), *aff’d per curiam*, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958)).

Art Unit: 2176

If a claim defines a useful machine or manufacture by identifying the physical structure of the machine or manufacture in terms of its hardware or hardware and software combination, it defines a statutory product. See, e.g., Lowry, 32 F.3d at 1583, 32 USPQ2d at 1034-35; Warmerdam, 33 F.3d at 1361-62, 31 USPQ2d at 1760. Office personnel must treat each claim as a whole. The mere fact that a hardware element is recited in a claim does not necessarily limit the claim to a specific machine or manufacture. Cf. In re Iwahashi, 888 F.2d 1370, 1374-75, 12 USPQ2d 1908, 1911-12 (Fed. Cir. 1989), cited with approval in Alappat, 33 F.3d at 1544 n.24, 31 USPQ2d at 1558 n.24.

A claim limited to a machine or manufacture, which has a practical application in the technological arts, is statutory. In most cases, a claim to a specific machine or manufacture will have a practical application in the technological arts. See Alappat, 33 F.3d at 1544, 31 USPQ2d at 1557 ("the claimed invention as a whole is directed to a combination of interrelated elements which combine to form a machine for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means. This is not a disembodied mathematical concept which may be characterized as an abstract idea,' but rather a specific machine to produce a useful, concrete, and tangible result."); and State Street, 149 F.3d at 1373, 47 USPQ2d at 1601 ("the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces a useful, concrete and tangible result' – a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades."). Also see AT &T, 172 F.3d at 1358, 50 USPQ2d at 1452 (Claims drawn to a long-distance telephone billing process containing mathematical algorithms were held patentable subject matter because the process used the algorithm to produce a useful, concrete, tangible result without preempting other uses of the mathematical principle.).

Independent claims 10 and 20 are rejected as non-statutory because they are broader than claims 11 and 21 and thus since the dependent claims are non-statutory, so are the broader independent claims.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-3, 8-9, 10-14, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Najork et al. (hereafter referred to as Najork), US 6,321,265 B1 filed 11/02/1999.**

**Regarding independent claim 1**, Najork discloses receiving a plurality of links to hyperlinked documents to be crawled in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses grouping the plurality of links to hyperlinked documents by host in fig. 7 and col. 2 lines 24-36. Najork discloses selecting a host to crawl next according to a stall time of the host in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses crawling a hyperlinked document from the selected host in col. 1 lines 31-47 and col. 3 lines 3-52.

**Regarding dependent claim 2**, Najork discloses wherein the stall time of the host is the earliest time in which a hyperlinked document from the host should be crawled in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39.

**Regarding dependent claim 3**, Najork discloses selecting a host with a stall time that is earlier than the current time in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39.

**Regarding dependent claim 8**, Najork discloses determining a retrieval time for retrieving the hyperlinked document from the selected host in col. 2 lines 43-52.

**Regarding dependent claim 9**, Najork discloses adjusting subsequent stall times for the selected host according to the retrieval times in col. 2 lines 43-52.

**Regarding independent claim 10**, Najork discloses receiving a plurality of links to hyperlinked documents to be crawled in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses grouping the plurality of links to hyperlinked documents by host in fig. 7 and col. 2 lines 24-36. Najork discloses selecting a host to crawl next according to a stall time of the host in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses crawling a

Art Unit: 2176

hyperlinked document from the selected host in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses a computer readable medium that stores computer codes in fig. 1 and col. 1 lines 13-30.

**Regarding dependent claim 11**, Najork discloses a computer readable medium which is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied on a carrier wave in fig. 1 and col. 1 lines 13-30.

**Regarding independent claim 12**, Najork discloses receiving a plurality of links to hyperlinked documents to be crawled in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses grouping the plurality of links to hyperlinked documents by host in fig. 7 and col. 2 lines 24-36. Najork discloses selecting a host to crawl next according to a stall time of the host in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses crawling a hyperlinked document from the selected host in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses determining a retrieval time for retrieving the hyperlinked document from the selected host in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses adjusting subsequent stall times for the selected host according to the retrieval time in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39.

**Regarding dependent claim 13**, Najork discloses wherein the stall time of the host is the earliest time in which a hyperlinked document from the host should be crawled in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39.

**Regarding dependent claim 14**, Najork discloses selecting a host with a stall time that is earlier than the current time in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39.

**Regarding independent claim 20**, Najork discloses receiving a plurality of links to hyperlinked documents to be crawled in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses grouping the plurality of links to hyperlinked documents by host in fig. 7 and col. 2 lines 24-36. Najork discloses selecting a host to crawl next according to a stall time of the host in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses crawling a hyperlinked document from the selected host in col. 1 lines 31-47 and col. 3 lines 3-52. Najork discloses determining a retrieval time for retrieving the hyperlinked document from the selected host in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses adjusting subsequent stall times for the selected host according to the retrieval time in fig. 6, col. 1 line 60 – col. 2 line 2, col. 2 lines 37-62, and col. 3 lines 23-39. Najork discloses a computer readable medium that stores computer codes in fig. 1 and col. 1 lines 13-30.

**Regarding dependent claim 21**, Najork discloses a computer readable medium which is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied on a carrier wave in fig. 1 and col. 1 lines 13-30.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2176

**8. Claims 4-7, 15-19, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Najork et al. (hereafter referred to as Najork), US 6,321,265 B1 filed 11/02/1999.**

**Regarding dependent claim 4,** Najork does not explicitly teach grouping the hosts according to the number of hyperlinked documents to be crawled at each host. Najork does teach grouping the hosts in fig. 7, and col. 2 lines 24-36. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined their knowledge with Najork to have created the combined invention. It would have been obvious and desirable to have grouped the hosts according to the number of hyperlinked documents to be crawled so that the largest groups could have been processed first.

**Regarding dependent claim 5,** Najork teaches examining the groups in descending order of the number of hyperlinked documents to be crawled at each host until a host is found with a stall time that is earlier than the current time in fig. 5-7, col. 1 line 31 – col. 2 line 2, and col. 2 lines 37-62.

**Regarding dependent claim 6,** Najork teaches sorting the hosts in fig. 6-7 and col. 1 line 60 – col. 2 line 2 and col. 2 lines 37-62. Najork does not specifically teach sorting the hosts by stall time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Najork to have sorted the hosts according to stall time. It would have been obvious and desirable to have done this so that the web crawler could have crawled the sites in a time-efficient order.

**Regarding dependent claim 7,** Najork does not teach moving the selected host to a group with one less hyperlinked documents to be crawled. It would have been obvious to one of



Art Unit: 2176

ordinary skill in the art at the time the invention was made to have modified Najork so that the a selected host would have been moved to a group with one less hyperlinked documents to be crawled. It would have been obvious and desirable to have done this so that the groups would have remained balanced for the web crawler.

**Regarding dependent claim 15**, Najork does not explicitly teach grouping the hosts according to the number of hyperlinked documents to be crawled at each host. Najork does teach grouping the hosts in fig. 7, and col. 2 lines 24-36. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined their knowledge with Najork to have created the combined invention. It would have been obvious and desirable to have grouped the hosts according to the number of hyperlinked documents to be crawled so that the largest groups could have been processed first.

**Regarding dependent claim 16**, Najork teaches examining the groups in descending order of the number of hyperlinked documents to be crawled at each host until a host is found with a stall time that is earlier than the current time in fig. 5-7, col. 1 line 31 – col. 2 line 2, and col. 2 lines 37-62.

**Regarding dependent claim 17**, Najork teaches sorting the hosts in fig. 6-7 and col. 1 line 60 – col. 2 line 2 and col. 2 lines 37-62. Najork does not specifically teach sorting the hosts by stall time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Najork to have sorted the hosts according to stall time. It would have been obvious and desirable to have done this so that the web crawler could have crawled the sites in a time-efficient order.

**Regarding dependent claim 18**, Najork does not teach moving the selected host to a group with one less hyperlinked documents to be crawled. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Najork so that the a selected host would have been moved to a group with one less hyperlinked documents to be crawled. It would have been obvious and desirable to have done this so that the groups would have remained balanced for the web crawler.

**Regarding dependent claim 19**, Najork teaches displaying the at least one category that was selected with the search results from the query in col. 1 lines 13-48.

**Regarding independent claim 22**, Najork teaches storing a plurality of links to hyperlinked documents to be crawled in col. 1 lines 31-47. Najork teaches receiving additional links to hyperlinked documents in fig. 1 and col. 3 lines 3-52. Najork teaches selecting a host to crawl next according to a stall time of the host in fig. 6, col. 1 line 60 – col. 2 line 2 and col. 2 lines 37-62. Najork teaches crawling a hyperlinked document from the selected host in col. 1 lines 31-47. Najork does not specifically teach determining that more links to hyperlinked documents are desired and sending requests to multiple link managers for more links to hyperlinked documents.

Najork does teach the use of a web indexing system which the web crawler can access to obtain addresses for web pages in fig. 1 and col. 4 line 63 – col. 5 line 3. Najork also teaches a assigning hosts to the queue the web crawler uses to crawl hyperlinked documents in col. 5 lines 4-41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the queues and indexing system of Najork to have operated as a link

Art Unit: 2176

manager from which the web crawler could have requested more links to hyperlinked documents.

**Regarding independent claim 23**, Najork teaches storing a plurality of links to hyperlinked documents to be crawled in col. 1 lines 31-47. Najork teaches receiving additional links to hyperlinked documents in fig. 1 and col. 3 lines 3-52. Najork teaches selecting a host to crawl next according to a stall time of the host in fig. 6, col. 1 line 60 – col. 2 line 2 and col. 2 lines 37-62. Najork teaches crawling a hyperlinked document from the selected host in col. 1 lines 31-47. Najork teaches a computer readable medium that stores computer codes in fig. 1 and col. 1 lines 13-30. Najork does not specifically teach determining that more links to hyperlinked documents are desired and sending requests to multiple link managers for more links to hyperlinked documents.

Najork does teach the use of a web indexing system which the web crawler can access to obtain addresses for web pages in fig. 1 and col. 4 line 63 – col. 5 line 3. Najork also teaches a assigning hosts to the queue the web crawler uses to crawl hyperlinked documents in col. 5 lines 4-41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the queues and indexing system of Najork to have operated as a link manager from which the web crawler could have requested more links to hyperlinked documents.

**Regarding dependent claim 24**, Najork teaches a computer readable medium which is a CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, or data signal embodied on a carrier wave in fig. 1 and col. 1 lines 13-30.

Art Unit: 2176

***Conclusion***


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Najork et al., US 6,263,364 B1 filed 11/02/1999 discloses a web crawler system using a plurality of parallel priority level queues having distinct associated download priority levels for prioritized document downloading. Najork et al., US 6,377,984 B1 filed 11/02/1999 discloses using parallel queues for queuing data sets having common address and concurrently downloading data associated with the data set in each queue. Eichstaedt et al., US 6,182,085 B1 filed 05/28/1998 discloses the use of a distributed collection of web-crawlers to gather information over a large portion of the internet. Kraft et al., US 6,418,453 B1 filed 11/03/1999 discloses a network repository service for efficient web crawling. Meyerzon et al., US 6,424,966 B1 filed 06/30/1998 discloses synchronizing a crawler with a notification source.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 703-305-5931. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

PJS  
January 5, 2004

  
**JOSEPH FEILD**  
**SUPERVISORY PATENT EXAMINER**